



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: )  
ARNDT ) Examiner: K. Jolley  
Serial No.: 10/021,212 ) Art Unit: 1762  
Filed: 10/26/01 )  
For: INKLESS FINGERPRINT )  
COMPOSITION AND )  
APPLICATOR THEREFOR )

RECEIVED  
DEC 31 2003  
TC 1700

#### DECLARATION OF DOUGLAS C. ARNDT

I, Douglas C. Arndt, hereby declare as follows:

1. I am the inventor of the above-named application.
2. At the request of the assignee's counsel, Harold L. Jackson, I have reviewed the Office Action dated September 25, 2003 in the above application and the references relied on by the Examiner in rejecting Claims 1-21.

#### QUALIFICATIONS

3. My qualifications for the opinions expressed herein are as follows:
  - a. I have been interested in chemistry and physics since my early schooling and have read many books in those fields over the years. I graduated from Thousand Oaks High School, Thousand Oaks, California in 1977 and received an APICS Certificate from UCLA (via extension courses) in production and purchasing management in 1986. My college courses included engineering, calculus, mechanics of solids and other physics, chemistry related subjects, as well as business related courses.

b. During 1978-83 I was employed by Westlake Magnetics (a manufacturer of stators and armatures for electric motors for the aerospace industry located in Westlake, California) as a machinist and production supervisor.

c. During 1983-1990 I worked full-time for Identicator Corporation, initially as the production supervisor and subsequently (i.e., 1984) as the production manager. In that capacity I was responsible for the production scheduling, product improvement and resolution of chemical and other problems associated with the manufacture of individual fingerprint inks, including nonstaining inks, ink dispensing pads and inkless fingerprint systems. I was also responsible for the development of new products. Patents relating to fingerprint technology, which have issued in my name as the inventor or co-inventor, are U.S. Patent Nos. 4,983,415; 4,917,987; 4,705,299; 5,737,071; 6,488,750; 5,919, 292 ("292 patent"); 6,027,556 ("556 patent) among others.

d. In 1990 I joined HOH Water Technology Corporation (a developer of water purification equipment located in Laguna Hills, California) as the production manager in charge of placing a prototype water demineralizer apparatus (removal of salt from water) into production. In that capacity I dealt with fluid flow and various types of chemical reaction problems. During this time I continued to consult for Identicator as it's primary R & D person.

e. In 1997 I rejoined Identicator Corporation, later referred to as Identicator, Inc., ("Identicator") as a full-time consultant and personally manufactured or supervised the manufacture of most of the inkless reagents as well as carbon based pigmented inks distributed by the company. Around December 2001 Armor Holdings, Inc. acquired the assets of Identicator, Inc. and subsequently such assets, including the subject application, were transferred

to Armor Holdings Forensic, Inc. ("AH").

f. I have been employed by AH, since the acquisition, as the director of research and development of fingerprint based products.

g. While working as an employee or consultant of Identicator I supervised the manufacture of the reagents for use with the two part inkless applicator described in the Smith et al patent number 4,029,012 ("012 patent"). The liquid developer solution as used in the applicator was a liquid with a viscosity of around 100 cps, as described in the patent at 3:27-30. Such a liquid cannot be classified as a semi-solid or gel and would be totally unsuitable for use in the invention described and claimed in the subject application. While at Identicator I also supplied a fingerprint kit, in which an inkless reagent was impregnated into an absorbent pad, to Anthony Streeter at Wallace Computer Services. This kit is referred to in the Streeter patent number 5,879,453 at 6:41-41. The inkless reagent supplied to Streeter had a viscosity of the same order of magnitude as that discussed above, i.e, about 100 cps and is not a semi-solid or gel although it was mistakenly referred to as a gel by Mr. Streeter in his patent.

#### COMMENTS CONCERNING THE STATEMENTS IN THE OFFICE ACTION

4. The invention described and claimed in this application resulted from my efforts to develop reliable and inexpensive inkless fingerprint compositions and a disposable applicator for use by law enforcement officers.

5. As is pointed out in the background section of my application, relatively inexpensive ink coaters are and have been available in which a carbon pigmented ink in a lanolin solution is sandwiched between thin plastic strips. The ink is available to be applied to the fingertips of the

person to be fingerprinted by simply pressing the person's finger against one or both of the strips. Several problems are often encountered in the use of such disposable ink applicators. The ink stains the fingertips of the person being fingerprinted. In addition, the foil strips are difficult to open and the lanolin with its low melting/softening point tends to migrate at warm ambient temperatures impairing the uniformity of the coating on the strips with a resulting poor quality print.

6. As I have pointed out in my earlier applications/patents, inkless or non-staining fingerprint compositions ("inkless fingerprint compositions") overcome the finger staining objection. However, disposable systems for delivering such inkless fingerprint compositions can be relatively expensive on a per fingerprint basis. For example, a standard encapsulated towelette (containing a simple detergent solution for cleaning one's fingers) without fingerprint reagents or overhanging pull tabs can cost several cents per applicator. See the nonstaining ink/applicator disclosed in my '556 patent which costs several times more than the standard towelette to manufacture. The disposable applicator of the present invention, suitable for coating ten fingerprint areas with the desired inkless reagent(s), can be manufactured (and even out sourced) at a cost which is of an order of magnitude less than the cost of the '556 unit.

7. AH has been recently informed that it will receive an order for about 800,000 units of the inkless fingerprint composition and disposable coater as described and claimed in this application. In addition it is expected that there will be a monthly increase in volume until a rate of perhaps as much as two or more million units per month is achieved. The low price is a key factor.

8. In the Office Action the Examiner referred to the Levitt patent number 4,363,286 as teaching the use of an inkless fingerprint composition positioned between two non-permeable foil strips. However, the reference in Levitt to obtaining "clear finger-prints" at 1:50-51 means, in context, that the prints are of high definition or resolution. It does not mean, in my opinion, that the prints are made with an inkless composition. Furthermore, it is not seen how an inkless composition would be compatible with Levitt's system since a reaction between two separate reagents is generally necessary to form the print. There is certainly no teaching of such a system in the patent. Furthermore, in Levitt's system a negative image of a fingerprint, i.e., ridge pattern, is left on the inked top surface of the sheet 11 after the finger tip is removed. This is the reverse of the conventional fingerprint system. The sheet 11 of Levitt would have to be absorbent instead of non-permeable to retain the negative image. Such a system would not meet the requirements of the law enforcement agencies.

9. In summary, Levitt does not teach the use of an inkless composition and does not sandwich his ink between two non-permeable strips.

10. The Meadows et al patent number 4, 699,077 discloses wadded-up towlette, impregnated with a color former, in a foil pouch. This system is relatively expensive to manufacture on a per unit basis as discussed previously and is no more relevant to the present invention than my '556 patent.

11. The Smith et al '012 patent teaches the use of a liquid reagent, i.e., developer, having a viscosity of between 20 to 100 cps. Such a liquid is not semi-solid at ambient temperature and would not be compatible with my invention. It would simply run off the non-permeable sheet during the assembly step leaving insufficient, if any, reagent left for the fingerprinting process.

It is to be noted that liquid castor oil at room temperature, i.e., 20E c, has a cps of 986. *Handbook of Chemistry and Physics*, 50<sup>th</sup> Edition, published by the Chemical Rubber Co, F-41.

12. None of the cited references teach a semisolid fingerprint composition or the use of such a composition sandwiched between two non-permeable foil sheets.

13. My '292 patent describes a carbon based ink which provides a superior quality print. However, the fatty alcohols and fatty acid esters disclosed therein would not dissolve the metallic salts used in the Smith et al '012 fingerprint composition and if added to such composition would cause other problems. In my opinion one skilled in the art would not have found it obvious or desirable to substitute the non-volatile oils described in my '292 patent for the carrier in the reagent solution of Smith. Neither Smith nor my '292 patent suggest formulating a semi-solid inkless fingerprint composition and sandwiching the composition between two non-permeable foil strips to provide a very inexpensive, disposable inkless applicator.

14. I do not believe that my invention, as described and claimed in the subject application, would have been obvious to one of ordinary skill in the art in light of the teachings in the references relied on by the Examiner. The Levitt, Meadows and Smith et al patents have been around for many years and although the Streeter patent issued more recently, I do not believe that it would be of any more relevance to my invention than the Smith et al patent.

15. There has been a need for a simple and inexpensive disposable inkless fingerprint composition/applicator for many years. I believe that I largely solved that need. If the solution had been obvious, then I would think that others working in this field would have come up with my solution.

16. All statements made herein of my own knowledge are true and all statements made on information and belief are believed to be true, and further, that these statements made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or document or any registration resulting therefrom.

Signed this 15<sup>th</sup> day of December, 2003 at Jacksonville, Florida.

Douglas C. Arndt

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